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EXAMINER

MOTTOLA, STEVEN J

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

088433

Applicant(s)

Visser et al.

Examiner

Mottola

Group Art Unit

2817

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to <sup>pre-amendment</sup> communication(s) filed on June 10, 2002.
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-4, 6-12, 15 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
- ☒ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_ ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other \_\_\_\_\_

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The disclosure is objected to because of the following informalities: on page 7 of the specification there are a few instances of referring to the spacing with a blank reference numeral. See lines 2,4,10 and 17 for instance.

Appropriate correction is required.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is unclear how the desired spacing is derived from the FWHM; an example is given at the top of page 7 with reference to the graph of fig. 5 but no derivation is made nor a relationship defined.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 defines the second transmission medium as a three dimensional cavity but claim 6 from which it depends defines the second transmission medium as a transmission line which would not conventionally include a three dimensional cavity.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Osterwalder.

Fig. 1 of Osterwalder shows an input signal transmission line 10 and output signal transmission line 12 that include respective input and output nodes as claimed for a plurality of amplifiers A1-  
An connected in spaced parallel paths as claimed between the lines. These lines may of course be read on the claimed media and the amplifiers on the like elements claimed. An input signal is divided at the input node into each amplifier path as claimed. Since each path is the same, there will be equal delay in each path and the output line is microstrip which meets the two dimensional conductive layer limitation of the claim. See col. 3, lines 18-21. As noted in the abstract the signals on the output line in one direction add and the other cancel. Since the signals traveling toward the output are in phase (see col.2, lines 7-17 of Osterwalder) they will be coherently summed as claimed while degradation of the signal from the amplifiers is prevented (see col. 2, lines 19-25) which may be read on the noise suppression limitation claimed.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osterwalder.

The input and output node, plurality of amplifiers, signal dividing and delay limitations of independent claims 1 and 11 as well as the coherent signal summing and incoherent noise summing limitations at the end of claim 11 are read on the reference in the same matter as described w.r.t. claim 15 above. (This is the first five limitations of claim 1 and the first three steps and last two phrases of claim 11). The difference added by these claims is the last limitation/step which relates to the particular spacing between the paths; however, this would have been an obvious matter of finding an optimum or workable range. (Regarding the limitation of an input signal having a FWHM parameter, which would apply to a pulse type input signal, the type of signal to be amplified would be a matter of intended use).

Claims 4,6,8,9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osterwalder in view of Schindler.

Art Unit:

The difference added by claims 4 and 12 is the termination means claimed, not shown by Osterwalder (the propagation direction limitations of claim 12 are treated the same as these limitations in claim 15 above). Schindler in fig. 1 for instance shows input and output line termination means 13,10 respectively for a parallel distributed amplifier. Note that Schindler's transmission lines T1,T2,etc. are microstrip as in Osterwalder. It would have been obvious to include such termination means at the respective ends of the transmission lines of Osterwalder in order to absorb any remaining noise components that may not have been canceled.

Regarding claims 6 and 8, as noted w.r.t. claim 15 above, components 10 and 12 of Osterwalder are transmission lines of microstrip construction as stated on line 18-19 of col. 3 of Osterwalder. The limitations of claim 9 are met by Osterwalder since the microstrip transmission lines are at once two dimensional and defined as transmission lines by Osterwalder at the passage just noted.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osterwalder in view of Schindler as applied to claim 6 above, and further in view of Gruchalla et al.


The difference added by this claim is the use of coaxial cable while the previously applied references have utilized microstrip transmission lines; however, the use of coaxial cable transmission lines with parallel distributed amplifiers is well known as exemplified by Gruchalla et al. where the input and output transmission lines in fig. 1 for instance may be coaxial cable as specified at col. 7, lines 51-52 for instance of Gruchalla et al. It would have been obvious to utilize coaxial cable as the transmission lines in the other references; the motivation could be for the shielding provided by coaxial line.

Art Unit:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Mottola whose telephone number is 703-308-4914. The examiner can normally be reached on M-Th from 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Pascal, can be reached on (703) 308-4909. The fax phone number for the organization where this application or proceeding is assigned is 703-308-6251.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



**Steven J. Mottola**  
Primary Examiner